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ABSTRACT

The current state of computer literacy and computer use among Anchorage School District elementary classroom teachers was assessed with a sample of four schools. Computer literacy was considered as the general range of skills and understandings needed to utilize a computer in the classroom effectively. A 17-item questionnaire, administered to 82 teachers in the schools, included demographic items and questions concerning classroom computer use, current computer knowledge, and home computer use. Results indicated that most of the 58 respondents did not feel that they possessed adequate knowledge of the many aspects of computer technology that are necessary for effective use of computers in the classroom. Although most of the teachers considered themselves unprepared, more than half of them were making some attempt to use a computer to aid in the instruction of their students. Many teachers reported sending their students to the library to work on the computer, but also reported that the practice was generally unproductive. Many comments reflected the overall frustration of teachers who felt unprepared to meet the challenge of using a computer in the classroom. Thirty references are listed, and an appendix contains the survey questionnaire. (LMM)

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Computer Literacy and Use

Among Elementary Classroom Teachers

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INTRODUCTION

Background

Many people believe that the current interest in and excitement about computers in classrooms is just another educational "fad," soon to fade away as have so many other revolutionary trends in education, such as the back-to-the-basics movement, open education, and programmed learning. In reality, the claim that computers are a fad is shallow and lacks evidence. The rapid growth of computer use in both businesses and homes points to the value of computer knowledge in our present day "information society." With the added incentive of declining prices on computers and computer related products, many businesses, parents, and even school systems have joined the ranks and purchased computer equipment. Sales of microcomputers to schools in 1981 totaled $35 million. By the end of 1984, microcomputer sales to schools are expected to be approximately $145 million.

Many major noneducation-oriented magazines, such as Time and Newsweek, have recently featured stories on the impact of computers on education. However, the role of microcomputer sin education has not fully been determined. Many school systems have had computers available to students for a number of years and have begun to develop organized systematic computer curricula. On the other hand, there are many school systems that, for numerous reasons, have not purchased any computers and therefore none are available to students or teachers. It is difficult to say what will result nationally from such inconsistent action on the part of our nation's schools. Nonetheless, computers are here to stay.

It is no secret among educators that many students are more knowledgeable about microcomputers than most teachers. Milner (1980) identifies many reasons why teachers do not know how to use computers in the classroom. Some of those reasons include lack of teacher training programs and lack of administrative incentives for teachers to learn about computers.

Statement of the Problem

The purpose of this study was to assess the present state of computer literacy and computer use among elementary classroom teachers in the Anchorage School District. Computer literacy is a catch-all term that has come to mean anything from familiarity with computers to the ability to program them. For the purposes of this study, computer literacy refers to the general range of skills and understandings needed to effectively utilize a computer in the classroom. This general range of skills includes the ability to operate a computer, disk drive, printer and other miscellaneous computer hardware, the ability to critically review and select software appropriate for particular classroom needs, and knowledge of effective classroom computer management techniques. Classroom teachers in this study included regular classroom teachers of grades K-6, special education resource teachers and special education teachers of self-contained classrooms, and teachers of Pre-Academic, Modified Primary, Slingerland, Chapter 1 Reading and Math classes. Teachers of physical education and music, librarians, and other school staff members were not considered classroom teachers in this study.

Significance of the Problem

Many elementary school teachers lack sufficient knowledge about microcomputers, how they function, and their potential impact on society; therefore, microcomputers are not being utilized to their fullest potential and elementary students are not being given adequate opportunity to gain computer literacy skills.

Definition of Terms

Microcomputer: Although there is not standard technical definition of microcomputer, microcomputer generally refers to a small personal computer or home computer that can be transported with relative ease. Microcomputers have a wide range of capabilities. The terms microcomputer and computer have been used interchangeably in this report, and unless otherwise specified, are congruous.

CMI: Computer Managed Instruction - When the computer is used in this capacity, it is used to provide tests, develop assignments, and keep records. The computer is not involved in the actual teaching of material.

CAI: Computer Assisted Instruction - In this type of instruction, the computer takes some of the responsibility for actually teaching the student. Within this general category, there are three forms of instruction: drill and practice, tutorial CAI, and simulation.

REVIEW OF THE LITERATURE

There is growing concern about computer literacy among both educators and the general public. This is evidenced by the hundreds of articles appearing in recent years in both professional education journals and popular magazines.

The age of the computer is now. Numerous areas of everyday life are being inundated by computers. Grocery stores use computers to produce itemized register tapes and to keep inventory. The garage computer analyzes engine problems. The department store, the office, and the kitchen are all part of a computerized society (Miller, 1980). Children today are exposed to computers via video games and electronic toys almost from the day they are born.

Society in general is demanding computer literacy. Many parents are demanding it now. According to Miller (1980):

> It is parents who are buying microcomputers for their schools. It is parents who are demanding that their children be made aware of the new "basic skill," computer literacy. It is parents who are doing the programming and teaching the teachers. The result is a bandwagon, a new crusade led by parents and abetted by a "videogame-wise" generation of students to whom pushing buttons means both power and pleasure (p. 90).

Levin (1980) also notes that the infusion of computers into grocery stores, small businesses, and living rooms is resulting in increased public pressure on school officials to invest in computers.

Computer literacy is quickly being added to the list of basic survival skills. Molnar (1978) calls computer literacy "as much a social obligation as reading literacy" (p. 35). In U.S. News and World Report, another writer claims that "to get along in today's technological society people must have hands-on experience with computers before they leave their formal schooling" (January 8, 1979, p. 39-40).

Many educators are still not convinced that computers are going to have much impact on the direction of education. There are many reasons for this lack of enthusiasm.

Milner (1980) believes computers are a low priority with many teachers because they lack knowledge about the potential for computer applications in the classroom, they do not see the relevance of computing in the curriculum, and they contend there is no room for computing in existing curricula.

Billings (1980) states that "some teachers are philosophically opposed to computer use because of its 1984 image" (p. 87). There is also a fear that microcomputers will destroy traditional schooling altogether by encouraging a gradual disappearance of books and schools as we know them.

Many educators are convinced that computers are another fad that will soon die away (Billings, 1980). It is difficult to understand the preponderance of this feeling among educators when so many leading journals are full of evidence to the contrary. Smelser (1979) sums up the predominant attitude present in articles reviewed for this study: "...microcomputer systems are not another edu-

cational tool that will go by the boards in a few years. In fact, their impact on education in the next few years will be significant" (p. 94). Levin (1980)J says simply, "Everyone in education will feel the impact of microcomputers in the 1980's" (p. 101).

Despite the lack of unity on the part of educators over the computers in education issue, the number of schools using computers is steadily growing. Recent actions on the part of the Anchorage School District are one such example of such growth. Currently, every elementary school in the district has at least two computers and in some schools there are as many as forty computers. The goal for the 1984-1985 school year is to have one computer in every elementary classroom.

In many parts of the country, computers are already an effective and successful part of the instructional program. In two suburban Washington school districts, for example, computer related skills and knowledge are reported as being "as integral a part of learning and teaching as pencils, paper, discussion groups, and the three R's" (Hunter, Dearborn, and Snyder, 1983, p. 115). Six schools in these two districts participated in a pilot project, the purpose of which was to field test a new guide for integrating computer use into the K-8 curriculum. A large proportion of the teachers and students in some of the schools were able to make extremely rapid progress in attaining computer literacy. Hunter, et.al. (1983) identifying several factors which accounted for their success (pp. 117-118):

1. Access to equipment
2. Availability of software
3. Important role of the media specialist
4. Teacher training
5. Teacher collaboration
6. Administrative support
7. Student enthusiasm

There seems to be little public awareness of the fact that most teachers, through no fault of their own, are not prepared to teach students about computers or to use a computer in teaching their classes. This situation exists because most teachers received their education "BC": before computers. Now teachers are finding they need computer literacy as part of their jobs (Martin and Heller, 1982).

A major step in realizing computer literacy among teacher is teacher education. Many school systems have taken the initial steps toward providing their teachers with the computer training they so desperately need. However, at present, states differ on their degree of commitment. Martin an Heller (1982) identify several ways school systems can demonstrate their commitment to teacher training for computer literacy (p. 46):

-Provide professional inservice days for computer literacy training

-Create resource centers

-Provide resources staff, especially in software and hardware areas

-Devote part of teacher meetings to computer literacy

-Designate a resource teacher within each school

Milner (1980) feels various types of teacher training and support activities are possible. The activities he identifies are included in the following list (p. 546):

1. Consulting by professional staff or outside experts
2. Department meetings and demonstrations
3. Workshops offered for inservice teachers who may not wish to commit themselves to entire courses
4. Summer curriculum development teams for teachers with previous development experience
5. Paid release time
6. Staff development within school systems
7. Memberships paid in professional organizations
8. Travel paid to professional meetings
9. University classes

There is considerable discussion in the literature about the lack of teacher training and the feeling of being "unprepared" to meet the challenges of classroom computer use. Milner (1980) discusses a recent survey conducted by

the Minnesota Educational Computing Consortium in which only 39% of 1,300 teachers surveyed agreed or strongly agreed that their training was adequate for using computers in instruction.

METHODS AND PROCEDURES

Design

It was determined that the descriptive research method was the most appropriate design to assess computer literacy and computer use among elementary school teachers. The population for this study was all elementary classroom teachers in the Anchorage School District, from which a sample of four schools was chosen.

Subjects

There are 52 elementary schools in the Anchorage School District. The average enrollment is about 400 students. The number of computers in each school ranges from two to twenty-five. Four schools have a computer in each classroom. Four schools were chosen for this study. The number of computers in these four schools ranged from three to twenty-two. The number of teachers in each school ranged from sixteen to twenty-six. The total number of teachers in the sample was eighty-two.

Instrument

The method of investigation was a 17-item questionnaire designed to gather information concerning teacher computer literacy and current computer use in the elementary classroom. The instrument was comprised of three parts. Part I consisted of six items designed to obtain demographic information about the respondents. Part II consisted of eight items concerning classroom computer use and current computer knowledge. Part III consisted of three items concerning home

computer use and was to be completed only by respondents who own a home computer. The questions in Part III were included because the researcher felt that the information obtained would be relevant to a study of computer literacy among elementary teachers. Respondents were invited to make comments on the back of the questionnaire if they so desired. A copy of the questionnaire can be found in the appendix.

Procedure

Each school was individually visited by the researcher. In three schools, the staff was assembled one morning before school began, the purpose of the study was briefly explained, and then the questionnaires were distributed. In two of those schools, questionnaires were completed at that time and were collected by the researcher. In the third school, time did not allow for the completion of the questionnaires at that time; therefore, the questionnaires were picked up at a later date after the staff had an opportunity to complete them. In the fourth school, questionnaires were distributed and completed in the teachers lounge during morning recess as teachers came into the lounge to take their breaks. The principal of this school took three additional questionnaires for three staff members who were absent, distributed them the next day, and collected them when they were completed. The researcher returned two days later and collected those three questionnaires along with one questionnaire completed by a staff member who didn't have time to complete it the day it was distributed. Questionnaires were to be completed by regular classroom teachers and special service classroom teachers only. Any questionnaires completed by

librarians, music teachers, physical education teachers, or other school staff members were eliminated.

To analyze the results of the questionnaire, descriptive statistics were used. Analysis was usually done by a simple tabulation of responses. Means were computed when appropriate. When tabulating responses, any response that was not clearly marked or clearly understood by the researcher was scored as "no response." When respondents circled more than one response when only one was called for, the researcher also scored these responses as "no response."

RESULTS

There was a total of 58 respondents from the four schools surveyed. The mean of the number of years of teaching experience was 11.9, with the number of years experience ranging from two to twenty-five. There were a number of respondents from each grade level as well as from special education and other special services. Table 1 shows the composition of the sample by grade taught.

Table 1: Composition of Sample by Grade

Grade	Number	Percent of Sample
K	3	5
1	7	12
2	6	10
3	9	16
4	6	10
5	9	16
6	5	8
Special Education	9	16
Other*	4	7
Total	58	100

*This category includes preacademic, modified primary, and Chapter One teachers.

The teachers were surveyed to determine the extent of formal education (college courses) and informal education (inservice sessions) they had received. Thirty respondents (52%) had taken one college computer course. Only

twenty respondents (35%) had taken one college course in which a computer was used. Although 27 respondents (47%) had attended one inservice session on computers, ten respondents (17%) had not attended any computer inservice sessions. Only 15% of those responding (N=9) had attended three or more computer inservice sessions (see Table 2).

Table 2: Number of College Courses/Inservice Sessions

	0		1		2		3		4		5		NR*	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
College Computer courses taken	14	24	30	52	11	19	2	3	1	2	0	0	0	0
College courses w/computer used	25	43	20	35	10	17	2	3	1	2	0	0	0	0
Inservice sessions	10	17	27	47	10	17	4	7	3	5	2	3	2	3

*NR=No response

The general feeling of respondents toward their personal degree of expertise with computers was not altogether high (see Table 3). Eighty-six percent considered themselves "beginners" in the use of computer education. Only 35% considered themselves computer literate. Fifty-two percent of the teachers responding felt adequately prepared to use a computer in their classrooms. Thirty-three teachers (57%) regularly used a computer to assist in the instruction of their students. Forty percent had computers permanently located in their classrooms.

Table 3: Summary of Responses to Questionnaire Item 6

	Yes N	Yes %	No N	No %	NR N	NR %
Do you own a home computer?	15	26	42	73	1	2
Do you permanently have a computer in your classroom?	23	40	35	60	0	0
Do you consider yourself a "beginner" in the use of computers in education?	50	86	7	12	1	2
Do you consider yourself to be computer literate?	20	35	36	62	2	3
Are you currently "expected" to use a computer in your classroom?	39	67	19	33	0	0
Do you ever use a computer to assist you in the instruction of your students?	46	79	12	21	0	0
Do you regularly use a computer to assist you in the instruction of your students?	33	57	25	43	0	0
Do you feel adequately prepared to use a computer in your classroom?	30	52	27	46	1	2

Computer Knowledge

Respondents were asked to indicate the extent of personal knowledge about many aspects of computer technology. (see Table 4) Responses ranged from 1 to 4, with 1 indicating the smallest amount of knowledge and 4 indicating the largest amount of knowledge. To assist teachers in the selection of their responses, the following statements were assigned to each numeric value on the questionnaire.

1-I know nothing about it.

2-I know a little, but not much.

3-I know some, but not a lot.

4-I know a lot about it.

How to operate a computer

Fourteen teachers (24%) indicated that they knew a lot about operating a computer; however most (43%) said they knew some about operating a computer, but not a lot. Three teachers (5%) indicated that they knew nothing about how to operate a computer.

Selecting appropriate software

Twelve teachers (21%) indicated that they knew a lot about selecting appropriate software. Most (36%) indicated that they knew some, but not a lot about selecting appropriate software. Eight teachers (13%) indicated that they knew nothing about software selection for the classroom.

Classroom management techniques

Most teachers (34%) indicated that they knew a little, but not much about classroom management techniques. Fifteen teachers (26%) indicated that they knew nothing about it. Only three teachers (5%) indicated that they knew a lot about management techniques for classroom computer use.

According to the mean response reported for each aspect of computer technology, teachers indicated that they knew the most about how to operate a computer ($\bar{X}=2.96$) and the least about how a computer actually processes information ($\bar{X}=1.77$).

Table 4: Extent of Knowledge of Various Aspects of Computer Technology

	1* N	1* %	2 N	2 %	3 N	3 %	4 N	4 %	NR N	NR %	$\bar{X}$
The historical development of computers	23	40	24	41	10	17	1	2	0	0	1.81
Computer hardware	6	10	25	43	21	36	6	10	0	0	2.46
How a computer actually processes information	20	34	28	48	7	12	1	2	1	2	1.77
How to operate a computer	3	5	16	27	25	43	14	24	0	0	2.96
Selecting appropriate software	8	13	17	29	21	36	12	21	0	0	2.63
Computer languages	17	29	24	41	16	27	1	2	0	0	2.01
Basic programming	22	38	18	31	17	29	2	3	0	0	2.01
The impact of computer technology on society	6	10	16	27	32	55	4	7	0	0	2.58
Laws governing computer piracy	16	27	21	36	15	26	4	7	2	3	2.12
Classroom computer management techniques	15	26	20	34	19	33	3	5	0	0	2.13

*Indicates degree of knowledge:
1=I know nothing about it.
2=I know a little, but not much.
3=I know some, but not a lot.
4=I know a lot about it.

Teachers received their knowledge of computers from many sources (see Table 5). Sixty percent of the respondents (N=35) received most of their computer knowledge from either college courses or inservice training sessions. Most of the answers scored as "no response" were thus scored because the respondent did not follow the directions on the questionnaire and circled more than one response.

Table 5: Primary Source of Computer Knowledge

Source	Number	Percent
Books/magazines	1	2
College courses	21	36
Friends/relatives	3	5
Inservice sessions	14	24
Other teachers	2	3
Television	0	0
Other	3	3
No Response	14	24

Most teachers reported that they usually got information about what computer programs to use from the school librarian (see Table 6). This reflects current research concerning the extreme importance of the media specialist in the effective implementation of a school wide computer program.

Table 6: Primary Source of Program (Software) Information

Source	Number	Percent
School librarian	21	36
Self-review and selection	12	21
Other teachers	11	19
Principal	0	0
Manuals	0	0
No response	6	10
Don't use a computer	8	14

Computer Use

Many teachers were attempting to use computers in their classrooms, even if they did not feel adequately prepared to do so. However, use in some schools was more predominate than use in others (see Table &). This was due in part to the reality that some schools simply had more computers available than others. However, as observed by the researcher, the fact that some schools had only 2 or 3 computers centrally located in the library did not necessarily preclude classroom use. Daily classroom computer use was reported by 30% of the teachers overall.

Frequency of computer use was also examined across grade levels (see Table 7). There was little difference among the degrees of use reported by primary (K-3) teachers, intermediate (4-6) teachers, and other teachers.

Many comments were made on the questionnaire concerning the ongoing library computer use programs within some schools. In these programs, students were

scheduled to go to the library from one to three times a week to work on the computer. The following comment reflects other verbal comments made to the researcher concerning the ineffectiveness of scheduling computer time for students in the library. The teacher wrote, "Please understand, we send two students at a time to the library to use it. It is not monitored very well."

Table 7: Frequency of Computer Use in the Classroom

	Percent reported							
	By school					By grade level		
Degree of Use	A	B	C	D	All	K-3	4-6	Other*
Daily	74	0	7	12.5	30	28	30	31
Often	26	25	20	50	31	32	25	28
Seldom	0	0	33	12.5	12	4	30	0
Never	0	75	40	0	20	28	10	23
No response	0	0	0	25	7	8	5	8

*Includes all other teachers in the sample who were not regular classroom teachers of grades K-6.

On the questionnaire, teachers were asked to select a statement which most accurately described their current computer use in the classroom. It is evident from reported responses that teachers who were indeed using the computer were using it with most or all of their students, and not just gifted/talented students or slow learners. When examining the statements selected, the variance in degree of use among schools is again evident (see Table 8). Overall, 74% of all respondents reported using the computer with all or almost all of their stu-

dents. To illustrate the wide range of use, as many as 88% of all responding teachers (School DO and as few as 20% of all responding teachers (School C) reported using a computer with all their students. Nineteen percent reported that they don't really use a computer in their classrooms at all.

Table 8: Statement Which Most Accurately Describes Current Classroom Computer Use

	Percent Reported at Each School				
	A	B	C	D	All
I use the computer with all my students.	79	62	20	88	64
I use the computer with almost all my students.	21	0	13	0	10
I usually use the computer for enrichment for the gifted/talented students in my class.	0	0	0	0	0
I usually use the computer to assist slow or reluctant learners.	0	0	0	11	2
I don't really use the computer in my classroom.	0	25	60	0	19
No response	0	13	7	0	5

Among the four participating schools, the computer was being used for a number of different subject areas. Not surprisingly, the subject area for which the computer was most often used was math (38%). Nine percent of the teachers most often used the computer for reading (see Table 9). In addition to using the computer for major subject areas, teachers also reported using the computer for typing skills/keyboard knowledge, games, logic, and independent thinking skills. One sixth grade teacher reportedly used the computer for his/her gradebook.

Table 9: Subject Area for Which Computer is Most often Used

	K-3*		4-6		Other		All	
Subject Area	N	%	N	%	N	%	N	%
Math	13	52	6	30	3	23	22	38
Reading	2	8	0	0	3	23	5	9
Spelling	0	0	3	15	1	8	4	7
Language	1	4	0	0	1	8	2	3
Social Studies	0	0	1	5	0	0	1	2
Science	0	0	0	0	0	0	0	0
Other	1	4	0	0	2	15	3	5
None	I	4	5	25	2	15	8	14
No response	7	28	5	25	1	8	13	22

*K-3 (N=25)
4-6 (N=20)
Other (N=13)
All (N=58)

Eighty-three percent of all respondents indicated that they would use a software catalog disk if the school district made one available. Fourteen percent indicated that they would not use a catalog disk. Three percent did not respond. Several respondents commented that they would be more likely to use such information if it was available in a printed catalog that could be kept in their classroom.

Out of 58 respondents, only 15 (26%) owned a home computer. Out of those 15 home computer owners, only four (27%) used a computer regularly for home computing. The average number of years that respondents had owned their computers

was 1.86. The computer was most often used as an educational tool for their children. Video game playing was the second most common home computer use. It is interesting to note that the school with the highest percentage of teachers who reported using a computer with all the students in their classroom (School D=88%), also had the highest percentage of teachers owning a home computer (38%) (see Table 10).

Table 10: Teacher Computer Use With All Students and Ownership of a Home Computer

School	Percent Using Computer With All Students	Percent Owning a Home Computer
A	79	5
B	62	37
C	20	33
D	88	38
All	64	26

SUMMARY AND CONCLUSIONS

This study assessed current classroom computer use and computer knowledge among elementary classroom teachers in the Anchorage School District. Results of this study show that most of the teachers surveyed did not feel that they possessed adequate knowledge of the many aspects of computer technology which are necessary to effectively use a computer in the classroom. Although most of the teachers considered themselves unprepared, more than half of the teachers were making some attempt to use a computer to aid in the instruction of their students. Many teachers reported sending their students to the library to work on the computer, but also reported that the practice was generally unproductive.

Many comments were made which reflected the overall frustration shown by teachers who felt unprepared to meet the challenge of using a computer in the classroom. Many of the teachers surveyed would benefit from more teacher training to help them face the computers they will find in their classrooms next fall when school convenes. This urgent need was expressed by one of the respondents who wrote: "This school district has spent thousands of dollars on computers but offers little in training to teachers." Current literature strongly supports teacher education as a major step in realizing computer literacy for everyone (Henderson, 1978; Sadowski, 1983; Bass, Brown, and Nold, 1975; Milner, 1980).

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APPENDIX

Teacher Computer Literacy and Use Survey

PART I

1. What grade do you teach? _____
2. How many years of teaching experience do you have? _____
3. How many college computer courses (if any) have you taken? _____
4. How many college courses (if any) have you taken in which you used a computer? _____
5. How many in-service training sessions (if any) have you attended on computer use? _____
6. Please respond to the following questions by circling 1 for "Yes" and 2 for "No."

		YES	NO
A.	Do you own a home computer?	1	2
B.	Do you permanently have a computer in your classroom?	1	2
C.	Do you consider yourself a "beginner" in the use of computers in education?	1	2
D.	Do you consider yourself to be computer literate?	1	2
E.	Are you currently "expected" to use a computer in your classroom?	1	2
F.	Do you <u>ever</u> use a computer to assist you in the instruction of your students?	1	2
G.	Do you <u>regularly</u> use a computer to assist you in the instruction of your students?	1	2
H.	Do you feel adequately prepared to use a computer in your classroom?	1	2

PART II

7. Please respond by circling 1, 2, 3, 4 to indicate the extent of your knowledge of the following aspects of computer technology.
   1 - I know nothing about it.
   2 - I know a little, but not much.
   3 - I know some, but not alot.
   4 - I know a lot about it.

A.	the historical development of computers	1	2	3	4
B.	computer hardware (ie. monitors, disk drives, etc.)	1	2	3	4
C.	how a computer actually processes information	1	2	3	4
D.	how to operate a computer	1	2	3	4
E.	selecting appropriate software	1	2	3	4
F.	computer languages	1	2	3	4
G.	basic programming	1	2	3	4
H.	the impact of computer technology on society	1	2	3	4
I.	laws governing computer piracy	1	2	3	4
J.	classroom computer management techniques	1	2	3	4

8. How often do you use a computer in your classroom?
   a. daily b. often c. seldom d. never

9. From what source did you receive most of your computer knowledge? (Circle ONE)
   a. books and magazines
   b. college courses
   c. friends, relatives
   d. in-service training sessions
   e. other teachers
   f. television
   g. other _____

10. For which of the following subject areas do you use the computer? (Circle all that apply)
   a. reading
   b. spelling
   c. language
   d. math
   e. social studies
   f. science
   g. other _____
   h. none

12. Where do you usually get information about what computer programs to use in your classroom? (Circle ONE)
   a. school librarian
   b. other teachers
   c. principal
   d. manuals
   e. self-review and selection
   f. other _____
   g. I don't use a computer in my classroom.

13. If a catalog disk was developed by the school district containing information on all MECC disks and other programs available, would you use it to help you select appropriate programs for classroom use?
   a. yes
   b. no

14. Which statement most accurately describes your current use of computers in the classroom? (circle ONE)
   a. I use the computer with all my students.
   b. I use the computer with almost all of my students.
   c. I usually use the computer for enrichment for the gifted/talented students in my class.
   d. I usually use the computer to assist slow or reluctant learners.
   e. I don't really use the computer in my classroom.

PART III

Please answer the following questions if you do own a home computer.

15. How many years have you owned your computer? _____
16. Do you regularly use a computer for personal computing?
   a. yes
   b. no
17. What do you use your computer for? (circle all that apply)
   a. home budgeting
   b. household inventory
   c. educational tool for children
   d. word processing
   e. bank accounts
   f. video game
   g. other _____